

USAWC STRATEGY RESEARCH PROJECT

THE ECONOMIC IMPLICATIONS OF KOREAN REUNIFICATION

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## ABSTRACT

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The Economic Implications of Korean Reunification is a detailed examination of the issues that may result from the creation of a single economy for the Republic of Korea (ROK) and the Democratic People's Republic of Korea (DPRK). The eventual reunification of the Korean peninsula will offer many challenges for the two countries, as well as for every entity with interests in the region. Economic reunification of the ROK and the DPRK, one an open economy operating under a democratic government, the other a holdover from the heyday of communism, will be a significant challenge. This paper is a consolidation of the issues associated with that economic reunification and an examination of potential solutions. Additionally, it addresses possible participants and the roles that each might play in rebuilding the economy in the north.



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## THE ECONOMIC IMPLICATIONS OF KOREAN REUNIFICATION

There is a Korean word, *sinparam*, that expresses the pathos, the inner joy, of a person moved to action not by coercion but by his own volition. *Param* is the sound of the wind; if a person is wafted along on this wind, songs burst from his lips and his legs dance with joy. A *sinparam* is a strange wind that billows in the hearts of people who have freed themselves from oppression, regained their freedom, and live in a society of mutual trust. This word, redolent with a shamanistic mystique, has a talisman-like appeal for Koreans.

~Chung Kyungmo

### KOREAN REUNIFICATION

Belief in near term Korean reunification varies with the diplomatic and political situations on the peninsula. However, there is generally an assumption that it is inevitable at some point in time. An important consideration in any discussion of reunification is the economic challenges and consequences. To accomplish reunification, it will be necessary to integrate two vastly different economic systems and to create a common understanding of how the resulting economy is supposed to function.

The Korean Peninsula has been divided since 1945, a division that has separated family members and resulted in the development of two very different governments and economies. The two Koreas are technically still at war; the Korean War ended with the signing of an Armistice agreement.<sup>1</sup> Two armed opponents continue to face each other across the demilitarized zone. The Republic of Korea has a force of 680,000 troops to counter the 1.1 million in the Democratic People's Republic of Korea.<sup>2</sup>

Now, almost sixty years later, reunification of the two countries continues to be an important issue for both the Republic of Korea (ROK) in the south and the Democratic Peoples Republic of Korea (DPRK) in the north. The ROK Ministry of Unification characterizes reunification as "a long-cherished desire and supreme desire of our race."<sup>3</sup> The ministry lists four reasons for pursuing reunification, two of which are specifically economic: continuing the single-country tradition, eliminating the pain resulting from the north-south division, reducing the financial costs associated with the division, and improving the peninsula's economic status.<sup>4</sup>

A major concern in any discussion of Korean reunification is the economic disparity between the two nations. The ROK's economy has flourished, growing to become the eleventh largest in the world in the mid-1990's. The DPRK has experienced severe economic reverses, leaving the government unable to even feed its population. Centralized control has resulted in a

stunted economy that lacks the ability to effectively integrate itself in the world economic system.<sup>5</sup>

## DIVISION OF THE PENINSULA

The current division of the Korean peninsula is the result of decisions made at the end of World War II. After 33 years of Japanese occupation, Korean independence officially occurred on 1 December 1943, when the United States, China, and Great Britain signed the Cairo Declaration. It stated, "The aforesaid three powers, mindful of the enslavement of the people of Korea, are determined that "in due course" Korea shall become free and independent."<sup>6</sup>

As hostilities came to an end, the United States developed extensive plans for the administration of Japan, but no such effort was made for Korea. At midnight on 10 August 1945, two Army lieutenant colonels arbitrarily selected the 38<sup>th</sup> parallel as the dividing line on the Korean peninsula between the U.S. and Soviet zones of occupation. No Korean experts were consulted, and the officers were not aware that the Japanese and Russians had once discussed the same dividing line, resulting in a decision that tacitly recognized Moscow's claim to the northern half of the peninsula.<sup>7</sup> On September 9, 1948, this separation gained permanence when the Democratic People's Republic of Korea (DPRK) was established in Pyongyang. This event followed the formation three weeks earlier in Seoul of the Republic of Korea (ROK).<sup>8</sup>

On June 25, 1950, the DPRK launched an invasion into the ROK. Fighting under the flag of the United Nations, the United States and 15 other nations assisted the South Koreans in turning back the DPRK forces. China intervened to support the North Koreans, and ultimately, the three-year war concluded with an armistice that still exists today.<sup>9</sup>

When the Armistice was signed, the Korean peninsula was once again divided, by a demilitarized zone (DMZ), at approximately the same line that existed prior to the onset of hostilities. Following the end of the war, the ROK began the process of becoming a democratic nation, leading to the declaration in the 1987 constitution that the ROK is a democratic republic.<sup>10</sup> North of the DMZ, a closed, socialist system of government evolved.<sup>11</sup>

Since the war, the two Koreas have pursued dramatically different economic and political strategies. The ROK has become increasingly more affluent and democratic, developing a market-based economic system.<sup>12</sup> At the same time, the DPRK has become an isolated socialist dictatorship with a Marxist-Leninist command economy,<sup>13</sup> which now can no longer feed its population.<sup>14</sup> By 1996, the ROK's gross domestic product (GDP) was approximately

\$490 billion, or more than \$11,000 per capita, compared to a GDP in the DPRK of \$20 billion, or less than \$1,000 per person.<sup>15</sup>

## **CURRENT ECONOMY**

While the North seems in many respects frozen in time, South Korea has been transformed by rapid change in the last quarter-century.

?Don Oberdorfer

## **THE ROK ECONOMY**

The ROK economy has made incredible progress since the Korean War. Over time, the country has created an economy that has privatized the means of production, diversified decision-making processes, and built-in stabilization mechanisms based on market laws.<sup>16</sup>

In 1961, when Park Chung Hee, a ROK Army major general, took power following a coup,<sup>17</sup> the ROK economy was in poor shape. Economic growth following the Korean War had been extremely slow. The United States was phasing out the economic assistance that had been provided following the war.<sup>18</sup> Park later wrote, "I honestly felt as if I had been given a pilfered household or a bankrupt firm to manage. Around me I could find little hope....I had to destroy, once and for all, the vicious circle of poverty and economic stagnation. Only by reforming the economic structure could we lay a foundation for decent living standards."<sup>19</sup>

Park's solution was a centralized economy based on five year plans. He modeled his economic system on Japan's. The structure he put in place required "brutally long work hours, high rates of savings and investment, and a hierarchical, authoritarian system that rewarded those who succeeded and punished those who did not cooperate."<sup>20</sup> He quickly created the Economic Planning Council, later the Economic Planning Board, which was responsible for developing the five year plans.<sup>21</sup>

The first five year plan stated that "the economic system will be a form of 'guided capitalism,' in which the principle of free enterprise and respect for freedom and initiative of free enterprise will be observed, but in which the government will either directly participate in or indirectly render guidance to the basic industries and other important fields."<sup>22</sup>

Park definitely "directly participated and rendered guidance." He brought in professional economists, many educated in American universities, to provide advice. However, he did not always follow their recommendations. For example, when American and World Bank economists told him it was not realistic for Korea to build a steel industry and would not provide the capital, Park turned to the Japanese for support. The result was the world's largest steel production facility and the creation of heavy industry in South Korea. When experts said the

Seoul to Pusan expressway was not feasible, Park took charge, personally seeking answers to technical engineering questions when necessary.<sup>23</sup> From that expressway, the ROK has developed a system of major highways that span the length and breadth of the country.<sup>24</sup>

President Park's efforts resulted in phenomenal economic growth. Inflation-adjusted GNP tripled each decade after Park took office. The result was the equivalent of a century of growth over three decades.<sup>25</sup>

A major factor in this sustained growth was a change in the orientation of Korean industry. Corporations began to focus their manufacturing efforts on export items. During this time period, Koreans were concerned about wasting resources and welcomed government involvement in the economy.<sup>26</sup>

One outcome of Korea's economic program was the creation of chaebols. These are large industrial conglomerates that command major portions of the ROK economy. The chaebols initially held a monopoly or oligopoly position and received economic and administrative support from the ROK government, allowing them to expand into a wide variety of businesses.<sup>27</sup> This consolidation facilitated the ROK's rapid economic improvements, but created relationships between business and the government that ultimately led to abuses and allegations of corruption.<sup>28</sup>

In the early and middle 1990s, the ROK experienced an average of six to seven percent growth in GDP each year. However, in 1997, the country began to encounter economic difficulties brought on by political corruption, an inefficient banking system, chaebol bankruptcies, and increasing wages.<sup>29</sup> Although Asian financial reversals have continued to impact the ROK's GDP, and caused the country's economic ranking to fall from eleventh to seventeenth by 1998, it is still substantially larger and more robust than its northern counterpart.<sup>30</sup> Despite a substantial decrease in exports brought about by a global economic slump, the ROK's diversified industrial base softened the impact on the country's economy. GDP growth did continue, but at a much slower pace, three percent in 2001 as opposed to 9.3 percent the previous year. The won also lost some ground, falling to 1317.01 to the dollar in 2002.<sup>31</sup>

#### THE DPRK ECONOMY

The DPRK does not provide much information on the status of its economy. Many of the estimates that have been developed are based on the analysis of economists, who extrapolate from the limited amount of data that is available.<sup>32</sup>

Following the World War II, the DPRK possessed much of the peninsula's natural resources and hydropower. The south was largely agricultural.<sup>33</sup> The north also gained most of the heavy industry.<sup>34</sup> However, despite the industrial advantage, as well as considerable support from socialist countries, the economy experienced steady decline from 1944 until 1956. From 1957 to 1961, the country's economy was converted to a socialist system; agriculture was collectivized, and industry was nationalized. The economy improved dramatically, with gross agricultural increases of close to 7.5 percent each year and gross industrial product growth of over 36 percent every year.<sup>35</sup>

By the late 1960s, the DPRK was no longer meeting growth targets. Because Kim Il Sung had taken China's side during the Sino-Soviet split in the early 1960s, the Soviet Union cut off much of its aid for a period of time. China could not make up the difference because it was still recovering from the impact of its "Great Leap Forward."<sup>36</sup>

While its economy was growing, the DPRK made the decision to increase defense spending. During the 1960s, defense expenditures tripled, and the increases continued into the 1970s. Economists have estimated that 15 to 20 percent of GDP was going to defense spending, compared to ten percent for the ROK in the 1970s. By the 1990s, the ROK was spending three percent of GDP on the military, while the DPRK had reached 25 percent. Economists believe that the disproportionate spending on defense has substantially contributed to the DPRK's economic problems.<sup>37</sup>

The DPRK attempted to change its economy by borrowing petro-dollars and buying Western plant equipment and technology. After the 1973 Arab-Israeli War, the country defaulted on its loans. During the 1980s, the DPRK turned to arms exports as a means to expand its international trade. The country exported the missiles in order to obtain hard currency. During the Iran-Iraq War, it provided arms to Teheran. It also sold Soviet-style Scud missiles and Chinese Silkworm missiles in the Middle East.<sup>38</sup>

In the 1980s, the DPRK passed legislation intended to reform its economy. Unfortunately, the government did not follow through with the changes required to bring in outside investors. In 1989, the situation was exacerbated when the Soviet Union stopped providing economic aid to the DPRK and established trade relations with the ROK.<sup>39</sup> In the 1990s, Russia and China both began requiring market prices and hard currency. The DPRK was unable to meet the new demands.<sup>40</sup>

Because of its inability to provide hard currency, the DPRK could not obtain the petroleum required to produce fertilizer or support its agriculture infrastructure. The problems in agriculture

soon affected industry, as shortages of material and fuel spread. What products and materials existed could not be moved because the transportation sector was affected.<sup>41</sup>

The DPRK has not been able to compete with the ROK economically. The ROK has prospered; per capita income rose to more than \$10,000 in the 1990s.<sup>42</sup> In the same timeframe, the DPRK's gross domestic product fell by 50-percent, resulting in a per capita income of \$481.<sup>43</sup> Based on data developed by the DPRK with the assistance the United Nations Development Program, it is estimated that by 1996, incomes in the ROK were more than 20 times those in the DPRK.<sup>44</sup>

## **GERMANY AS A CASE STUDY**

We are deeply impressed by the living, unbroken will for freedom that moves the people in Leipzig and many other towns. They know what they want. They want to determine their future themselves-in the original meaning of the words. In this we shall of course respect every decision that the people in the GDR take in free self-determination....

?Helmut Kohl

When the Berlin Wall came down on 9 November 1989, the Federal Republic of Germany (FRG) had to face the question of reunification. Elections held in the German Democratic Republic (GDR) on 18 March 1990 resolved the issue. The majority wanted the two German republics reunited immediately.<sup>45</sup>

The reunification of the two countries increased the FRG's land area by 30 percent and population by 20 percent. Before its absorption of the GDR, the FRG had one of the highest standards of living in the world, with a per capita income that exceeded the United States.' The costs associated with reunification have made it apparent that bringing the population of the former GDR up to the FRG's standard will be a long term effort.<sup>46</sup>

## **IMPACTS**

Reunification had some immediate negative impacts. The population in the east dropped dramatically because of mass migration to the west and a sharp drop in the birth rate. Women lost jobs and access to childcare as the economy transitioned away from the socialist model. East German elderly found themselves at a disadvantage because of lower savings and incomes.<sup>47</sup>

West Germans also discovered some unexpected problems in the east. One was the environment. There was substantial ecological damage, including extensive air and water pollution. This situation horrified the environmentally aware West Germans. While the West

Germans began to become concerned about the environment in the late 1960s, the East Germans followed the Soviet model, ignoring the environmental impacts of industrial and urban growth. This included failing to treat 95 percent of the country's waste water, and building 32 percent of the housing without sewage connections. As a consequence, 40 percent of the rivers and 24 percent of the lakes could not be used as drinking water sources. Extensive use of brown coal created significant emissions of sulfur dioxide and left strip mining areas exposed to the elements. The situation was exacerbated by the GDR's decision in the 1980s to import the FRG's trash to acquire hard currency, which impacted soil and ground water. Estimates of the cost to clean up the environmental contamination run as high as DM 400 billion.<sup>48</sup>

The extreme differences in prosperity between the two countries were a deciding factor in the decision to reunify.<sup>49</sup> Infrastructure and housing were also well below western standards, causing some to christen the east "Germany's Appalachia."<sup>50</sup>

The refugee situation also was a consideration in the reunification decision. Migration from the east increased to 389,000 in 1990. After reunification, it receded to 172,000 in 1993, and was balanced by the movement of 119,000 from west to east.<sup>51</sup>

German reunification created concerns in the international community. Because of the country's past history, many Europeans were uncomfortable with a reunified Germany. However, German politicians were sensitive to the reservations and made an effort to approach reunification in a broader European context.<sup>52</sup>

One of Germany's significant challenges at the beginning of reunification was property rights. There were two million claims filed, 11,200 of them for the return of companies. The government's hands were tied by a decision to make natural restitution to former owners, in other words, to let them reclaim their property. This decision was seen as a way to limit the government's restitution costs. However, it proved to be extremely complicated and inefficient.<sup>53</sup>

Natural restitution meant that the state-run industry in East Germany did not have clear title to many of its holdings. Properties seized by the GDR after Soviet occupation could be returned to their original owners. The same was true of any properties lost for religious or political reasons between 1933 and 1945. If the previous owner filed a claim, disposition of the property was delayed. A year after reunification, only 3.3 percent of the claims had been resolved, and 90 percent of the 11,200 companies were in limbo.<sup>54</sup>

Germany could have avoided this situation by providing financial compensation, a strategy that had been favored by the GDR government during negotiations. However, the June 15,



1990 bilateral statement preceding economic union specified that previous owners had greater rights. As a result, the German government had no latitude.<sup>55</sup>

The German government was reluctant to make decisions that would impact economic and political stability. This effectively slowed the transition of the east to a market economy. Instead of allowing economic dislocations in the interest of efficiency, the government tried to compromise. While this maintained stability in the short term, it avoided hard decisions and led to long term economic problems as the government tried to keep people in the east.<sup>56</sup>

Production costs in the GDR were extremely high. This situation was the result of a number of policy decisions, including the exchange rate set for converting GDR marks to Deutch marks and wage negotiations that did not consider relative productivity. West German firms also found it more cost effective to expand their own facilities, instead of using eastern facilities.<sup>57</sup>

Infrastructure shortfalls discouraged potential investors. The telephone system was not adequate to support modern businesses. Energy shortages plagued businesses in the east. The road and rail systems were inadequate and had not been properly maintained.<sup>58</sup>

The Korean government can learn a great deal by examining the German resolutions to these issues. They should be able to apply the German experience to their own situation and address impacts in advance, which could allow a much smoother reintegration.

## LESSONS

In retrospect, three policy decisions significantly increased the cost of German reunification, the speed of reunification, wage policies which resulted in high wages in the east, and ineffective privatization of East German industries.<sup>59</sup> These are all factors that the Koreans will face upon reunification.

A gradual reunification could have mitigated some of the problems that the Germans faced. The integration of the two currencies and even the economies could have been accomplished in a more deliberate manner. There would have been time to evaluate the impact of various courses of action and determine the most effective. Korea has the luxury of avoiding this situation, both by prior planning and resisting pressure to move with undue speed.

Wages will also be an issue for Korea. The challenge is to raise them enough to prevent massive migration, while at the same time not allowing wages to outstrip productivity. This ties in with the third policy decision, privatization of industry. To ensure employment for workers north of the DMZ and encourage capital investment, the Korean government must develop policies that will permit the efficient transition of state-owned industries to private corporations.

There are some significant differences between Germany and Korea that must be factored into any comparison. The DPRK is larger and much poorer than the GDR was in comparison to their counterparts.<sup>60</sup> When Germany was reunited, the GDR had a population of 17 million, or a little more than one-fourth of the FRG's population of 60 million. The DPRK's population is approximately 21 million, or half of the ROK's 43 million.<sup>61</sup> At the same time, Korea has a younger population than Germany, which is expected to increase their adaptability to new systems and training.<sup>62</sup> The DPRK is a much more closed society than the GDR was,<sup>63</sup> which may make the population's adjustment more difficult. The most important difference is that the Koreans have the advantage of being able to learn from the German experience.<sup>64</sup>

## **REUNIFICATION**

Evils which are patiently endured when they seem inevitable become intolerable once the idea of escape from them is suggested.

- Alexis DeTocqueville

## **ASSUMPTIONS**

In order to examine the potential economic implications of reunification, it is necessary to make some assumptions. The first is that the peninsula will be reunited under a government and an economic system that resemble the ones presently in place in the ROK. The second is that the infrastructure in the north will not be damaged beyond repair during the reunification process. Finally, the assumption must be made that the DPRK population is capable of making the transition to a more open society.

## **OVERALL COST**

Overall cost for reunification will be driven by a wide range of variables. In addition to costs associated with meeting basic requirements for the population of the north, there are a number of factors that must be considered (Table 1). Basic economic factors could include the national debt of both countries, as well as monetary union and one of Germany's Achilles heels, controlling wages. A number of factors related to the physical structure of the country must be incorporated, such as the need to rebuild industry and agriculture, the improvement of infrastructure and the environment, and a clear definition of property rights. There will be challenges for population north of the DMZ which will have a financial component, such as countering the effects of long term malnutrition, transitioning workers to a market economy, and creating employment opportunities.

Most cost estimates for Korean reunification assume that the capital investment in the DPRK will need to bring incomes to 60 percent of those in the south to prevent massive migration.<sup>65</sup> Because of the ROK's debts to the International Monetary Fund (IMF) and other international lenders, it is unlikely that the country can absorb the full costs of reuniting.<sup>66</sup>

The costs associated with reunification are staggering. One estimate, which assumed reunification in the year 2000, calculated a need for \$250 billion a year, with a total of \$3 trillion. As reunification moves farther into the future, these numbers will increase because of the continuing decline of the DPRK's economy. If the East German model is used, the requirement is \$140 billion for the first five years. If only investment transfers are considered, the annual requirement is still \$70 billion, or more than two-thirds of the ROK government's expenditures in 1995. This amount would equal 15 percent of the ROK's GDP; Germany's cost ran to five percent. Regardless of the figure chosen, the costs of reunification are well beyond the financial capabilities of the ROK.<sup>67</sup>

The Korea Development Institute projects that 50 percent of the cost will be devoted to upgrading the DPRK's infrastructure. However, based on the experience of Germany, the ROK may have to make adjustments. In 1992, Germany was forced to spend three-fourths of its budget on social welfare programs, limiting the funds available for capital investment.<sup>68</sup>

In order to finance reunification, the Korean Government will need to be able to tap the resources of international corporations and financial organizations. To successfully accomplish this, the government must provide an environment that is conducive to foreign investment, providing incentives and eliminating bureaucratic barriers.

## CULTURE AND IDEOLOGY

"Chuche" is an important part of the DPRK's ideology. According to Kim Il Sung, the concept means "the independent stance of rejecting dependence on others and of using one's own powers, believing in one's own strength and displaying the revolutionary spirit of self-reliance."<sup>69</sup> It emphasizes the importance of holding foreigners at arms-length.<sup>70</sup> All north Koreans were required to attend study groups and "re-education" meetings where this concept was emphasized.<sup>71</sup> Korean reunification will result in a need to teach north Koreans to think independently to allow them to function in a market economy.

The confusion encountered by North Koreans defecting to the South provides some insight into the different mindset that exists north of the DMZ. The variety and amount of goods available to them is overwhelming. Even the use of money is a new concept. According to one defector, "When I arrived in the south, I was amazed that this money could actually buy things.

In the north, you just don't carry money in your pocket. Shops don't even have any goods to buy if you did."<sup>72</sup>

Some defectors do not trust South Koreans, a feeling that is reciprocated. They point to instances where a defector is accused of a crime and the fact that he escaped from the DPRK is included in the news stories about the case. The defectors also feel that they are perceived as "simple-minded and lacking in creativity and spontaneity."<sup>73</sup> They think their superiors are reluctant to promote them or give them positions of responsibility.

Defectors are concerned that citizens of the ROK do not value anything from the north. For example, recognition of North Korean diplomas and credentials has been an issue. One doctor of Oriental medicine who graduated from a DPRK university was told he would have to obtain a diploma in the south in order to practice. Instead, he works as an electronics repairman. A 1997 law in the ROK is supposed to have corrected this problem by recognizing certifications obtained in the DPRK or elsewhere.<sup>74</sup>

To learn more about socialist cultures and economies, the ROK government is sending approximately 20 officials to up to 16 former communist or socialist countries to learn how they operated and are transitioning.<sup>75</sup> Hopefully, they will be able to use this information to develop a strategy to assist north Koreans as they transition to a democratic market society.

#### EXTENDED MALNUTRITION

Long term malnutrition may have a significant impact on the population of the DPRK. To offset its food shortages, the DPRK has instituted rationing, sometimes dropping allocations to as little as 150 grams per day. The country has also encouraged the creation of "alternative foods," such as leaves, grass, roots, and tree bark.<sup>76</sup>

With reunification, the national government will have to deal with the problems resulting from extended malnutrition, specifically its effect on the labor pool and the health care system. The lack of food and production of "alternative foods" creates not only hunger, but also micronutrient deficiencies. Micronutrients include vitamins and minerals and are used to help the body function.<sup>77</sup> For example, lack of iodine can lead to mental retardation, iron deficiencies cause anemia and cognitive disability,<sup>78</sup> and vitamin A deficiency is one of the world's leading causes of blindness.<sup>79</sup>

Children born to malnourished mothers begin life at a disadvantage. In utero malnutrition may make a person more prone to diseases as they grow older, creating an additional burden on the health care system. Subsequent availability of food can lead to high blood pressure, cardiovascular disease, and an increased risk for diabetes. Hungry people are more disposed

to infectious diseases because their bodies lack the ability to fight them.<sup>80</sup> Stunted growth and blindness are two irreversible results of malnutrition.<sup>81</sup> Following reunification, the education and health care systems will have to be prepared to accommodate these children.

Children who are malnourished have difficulty learning. The World Bank has calculated that malnourishment coupled with micronutrient deficiencies can lead to a five to ten percent loss in learning capability. Malnutrition early in life can reduce school performance, and reduce concentration and attentiveness.<sup>82</sup> The long term result is limitations in the capabilities of the work force.

Malnourished adults lack strength and physical stamina, which contributes to reductions on productivity. Losses can range from two to nine percent, depending on the level of malnutrition. Iron deficiency can cause fatigue, reducing productivity between five and 17 percent. One economist has estimated that malnutrition causes some south Asian countries one to two percent of their gross domestic product each year. The World Bank has estimated that malnutrition cost India between three and nine percent of its GDP in 1996. What is astonishing is that these costs equal or exceed the affected countries' annual health budgets.<sup>83</sup> The government of a reunified Korea must anticipate the costs associated with long term malnutrition and plan the allocation of appropriate funding.

## NATIONAL DEBT

### Republic of Korea

As of 2001, the ROK owed \$120.5 billion in foreign debt, or 13.9 percent of GDP.<sup>84</sup> From 1997 to 1999, during the Asian financial crisis, it became apparent that there were shortcomings in the ROK's economy, one of which was the enormous amount of foreign loans. Although the economy improved somewhat in 1999 and 2000, by 2001 economic growth had decreased by two-thirds.<sup>85</sup> This debt burden, coupled with reduced financial expansion, would substantially limit funds available from the government for reunification. Planning considerations might include the identification of alternate sources of capital and perhaps, even debt-forgiveness in return for some type of preferences.

### Democratic People's Republic of Korea

The DPRK's history of failure to repay debts has resulted in a bad credit rating and an inability to effectively engage in international trade.<sup>86</sup> The country quit repaying loans from Western nations in 1976. In 1994, it also stopped repaying what it owed Eastern bloc countries.<sup>87</sup> To resolve this issue, economists recommend a two-step process. The first step is

debt renegotiation and conversion. If modeled on Latin American countries, this would entail a combination of debt forgiveness and consolidation, along with the issuance of zero-coupon bonds with a 15 to 20 year life span. Second, the north would have to produce a convertible currency, an issue that could be moot following reunification.<sup>88</sup> While this process can not take place prior to reunification, preliminary planning and coordination could be accomplished to speed the process once the peninsula is reunited.

## MONETARY UNION

One result of reunification will be the use of a single currency. The best example of the implementation of a single currency was the introduction of the euro on 1 January. A number of benefits accrue from the use of a single currency. Transaction costs are reduced, exchange rate risk is eliminated, and the participants achieve greater price stability and price transparency. Interest rate premiums are lower, which reduces the cost of borrowing. In fact, in 1990, the European Commission estimated a savings equal to one-half percent of the European Union (EU) GDP as the result of the introduction of a single currency. A single currency also increases overall economic stability and reduces the possibility of policy induced impacts on the economy.<sup>89</sup>

Prior to elections in 1990, Chancellor Helmut Kohl promised the East Germans a one-to-one exchange rate for their marks. (At the time, the East German mark was trading on the open market at a rate of six or seven to one West German mark.) This was against the advice of bankers and economists. The alternatives included letting the East German mark find a reasonable level, a two-to-one exchange rate, letting the East develop fiscal and monetary policies that supported convertibility, issuing a new currency in the East, or postponing monetary union until the advent of the euro.<sup>90</sup>

The one-to-one exchange rate did offer some advantages. It accelerated economic improvements in East Germany, ended the inequities and abuses that existed in a dual system, and encouraged the East Germans to stay where they were, instead of migrating to the west.<sup>91</sup>

In the end, Chancellor Kohl was forced to abide by his promise. Wages and savings accounts up to a limit were exchanged one-for-one. Beyond the limit, the exchange rate for savings was two-for-one. There was a stipulation that wages and pensions would not be adjusted for inflation.<sup>92</sup> A year after monetary union, the economy in East Germany did begin to pick up.<sup>93</sup>

## PROPERTY RIGHTS

As was the case on the reunification of Germany, the Korean government will be pressured to return land and business holdings to previous owners. Issuing bonds as compensation is one method recommended to avoid the pitfalls the Germans encountered. In cases where owners have a legal basis and want to press their claim, setting up a separate court system would prevent the ROK judiciary from becoming overwhelmed.<sup>94</sup>

Property disputes in Korea may not present the same problem as Germany. When the government has acquired land for construction projects, ROK citizens have been ineffective in challenging the acquisitions.<sup>95</sup> It may be necessary for the government to follow a similar course in handling property disputes in the north, following reunification. This is definitely an area where prior planning can be conducted and coordinated with all the potential participants.

## INDUSTRY

The DPRK's production facilities are antiquated by current standards. To be competitive, the country needs to build new factories with modern equipment. North Koreans believe that only about 30 percent of the country's equipment would be in use without subsidies.<sup>96</sup>

Korea actually began to become industrialized during the last fifteen years of Japanese occupation. The number of Koreans employed in heavy industry tripled between 1936 and 1945.<sup>97</sup> In 1946, with the formation of the DPRK, industry was centralized and run based on a two-year economic plan modeled on the Soviet Union's.<sup>98</sup> By the beginning of the 1970s, the DPRK had stretched to the limits what could be accomplished based on centralized planning and the remnants of the Japanese occupation.<sup>99</sup>

The DPRK is able to manufacture products that can be characterized as part of the "second industrial revolution," including steel, chemicals, hydroelectric power, internal combustion engines, locomotives, motorcycles, and machine parts. However, it cannot compete in the "third industrial revolution," lacking the capability to produce electronics, computers, and telecommunications systems.<sup>100</sup>

At the end of World War II, the industrial bases of Germany and Japan had to be rebuilt. This resulted in some unanticipated benefits. It lowered production costs, improved workers' skills, significantly increased potential productivity, and provided the structure to provide long-term economic growth. This improved the economic situation for not only Germany and Japan, but other countries whose economies were integrated with the two. The lesson is that investment in North Korea's economy will benefit the ROK, as well as Northeast Asia and the Pacific rim. This should even lead to increased investment in the peninsula, thus widening the

domestic market and increasing the quality and quantity of exports.<sup>101</sup> The Korean government must ensure mechanisms are in place prior to reunification to permit and even encourage this investment.

## AGRICULTURE

Because of its mountainous terrain and a short growing season, the DPRK cultivates only one-fifth of its land. Excessive use of chemical fertilizers, along with a lack of crop rotation and significant erosion caused by the practice of completely clearing hillsides, has led to gradual reduction in the country's ability to produce food for its population.<sup>102</sup> In 1995, the situation was exacerbated by torrential rains that destroyed much of the country's agriculture. Approximately 20 percent of the country's farmland was destroyed.<sup>103</sup> For the first time, the DPRK publicly acknowledged its food shortage and requested aid from outside the country.<sup>104</sup>

Extensive assistance to the agricultural sector will be critical. Limited land must be reclaimed, and modern techniques must be implemented. This will require the support of governments, as well as international and nongovernmental organizations. There is a wide range of organizations that can support this effort, and they should be involved in any plan that is developed.

## INFRASTRUCTURE

The DPRK's infrastructure is in dire need of improvement to develop an effective economy. Railroads, roads, aviation, communications systems, and energy production all need to be upgraded. A railroad system is required that will link the DPRK with China, Russia, and Mongolia. A system of freeways is necessary to improve transportation both internally and to the country's neighbors. Ports need to be constructed or improved, notably at Chongjin and Rajin. Regular commercial airline service must be established with the ROK, China, Russia, and Japan. Chongjin Airport should be expanded to accommodate international passengers and shipping. Fiber optic cable, cellular telephone service, and electronic data transmission capabilities must be developed. (A fiber optic cable has been laid to connect Pyongyang and Rajin with Hunchun in China.) The DPRK has completed the first phase of the Mount Kumgang hydroelectric power station, improving the country's ability to generate electricity.<sup>105</sup> However, the country still does not produce sufficient energy to meet its requirements, and its power grid, which has been run underground as a security measure, is reported to have large transmission losses.<sup>106</sup> As in other areas, this problem can only be solved with outside investment.



## MIGRATION WITHIN THE PENINSULA

A major concern with reunification is the potential migration from north to south. Without capital investment in the north, scholars estimate that close to three-quarters of the north Korean population could move south. To obtain equilibrium with the south would almost require the depopulation of the north.<sup>107</sup> Eliminating migration would require investments of as much as \$1 trillion to provide employment and improve wages.<sup>108</sup> The alternative is marginally or underemployed people living on the outskirts of the ROK's cities.<sup>109</sup>

The only other option would be maintaining a sort of DMZ to prevent north to south migration. This solution would not sit well with the ROK government or population.<sup>110</sup> The best solution is to provide incentives to "stay put," including economic opportunities and initial basic humanitarian assistance.

## WAGES

Wages in the DPRK are low by ROK standards. Workers in special economic areas receive a minimum of \$74 per month; others receive \$100. Social insurance adds an additional \$20 to \$30 each month. Workers who are paid by the piece average less than \$50 per month.<sup>111</sup> In the ROK, per capita income had increased to more than \$833 per month in the 1990s.<sup>112</sup>

In Germany, even with one-to-one currency reform, wages in the east initially were about one-third those in the west. Measured against their productivity, this was a realistic level. The problem was wages quickly began to climb. By the end of 1991, wages had risen between 50 and 80 percent. This effectively eliminated any advantage that accrued from less expensive labor because there was no corresponding increase in productivity.<sup>113</sup>

Following reunification, Korean economists will have to work carefully to balance wages and productivity. Some increase will be necessary to provide north Koreans with a reasonable standard of living, but this will have to consider their economic contributions. Incentives and training to improve productivity will be essential.

## UNEMPLOYMENT

The Asian economic crisis has led to a significant increase in unemployment in the ROK, with almost two million workers without jobs in 1999.<sup>114</sup> Based on the German experience, this situation may be magnified by reunification. Ten years after reunification, unemployment in the former GDR is over 17 percent.<sup>115</sup> High unemployment in the north is extremely likely. The reduction in the armed forces, coupled with the need to retrain up to 80 percent of the work

force, will make it difficult for the economy to initially absorb the workers.<sup>116</sup> Additionally, if the north follows the employment patterns of the south, more than half of the industrial workers will not be required. Only one in three civilians employed in the north would be able to remain in an industrial occupation.<sup>117</sup>

As in the case in Germany, it is likely that women will bear a disproportionate share of the unemployment because they represent the majority of the DPRK labor pool, 57 percent. What to do with both armies will be a challenge, as each country has a large, conscripted force. The probable solution is the development of a smaller, professional military.<sup>118</sup>

International investment would provide north Korean workers with continued employment. In the short term, it may be necessary to provide some form of economic safety net. However, this must clearly be an interim measure to avoid developing dependence.

## ENVIRONMENT

It is difficult to determine the status of the environment in the DPRK. While the country passed an environmental protection law in 1986, its industrial development mirrors that of other socialist countries, such as Poland, Czechoslovakia, and Romania. These countries have some of the worst air, water, and soil pollution in the world. Additionally, the environmental protection law has been described by DPRK officials as “preventive, not curative.”<sup>119</sup> If the German experience is any indication, there will be significant costs associated with cleaning up the environment north of the DMZ.

The Korean government will need to survey the damage, then develop a comprehensive program that addresses all of the environmental shortfalls. They can look to a variety of governmental and private organizations for both funding and expertise.

Issue	Impact	Resolution	Comments
Cost	Initially estimated in excess of \$250 billion per year	Government funding with extensive foreign investment	Rok's debts limit ability to absorb costs
Ideology	Requirement to reeducate	Reeducation, exposure to the outside world	
Malnutrition	Health costs increase and productivity decreases	Provide required health care and	
National Debt	Affects ability to finance reunification	Debt renegotiation and conversion	\$120.5 billion for ROKG, DPRK has reneged
Monetary Union	Currency conversion can cause inflation and create resentment	Reasonable conversion rate, gradual implementation	
Property Rights	Affects ability to finance reunification	Establish clear title quickly and provide compensation to previous owners	ROK citizens and others have claims to north Korean property dating back to the 1940s
Industry	Antiquated in DPRK	Capital investment, retrain workers	Must make investment attractive to int'l corporations
Agriculture	Arable land destroyed, cannot feed population	Modern agricultural methods, reclaim damaged land	
Infrastructure	Must consider non-Korean investment	Provide financing/incentives to invest in infrastructure	Limited, antiquated
Migration	Must obtain equilibrium	Provide incentives to "stay put," including basic necessities and employment, gradually raise standard of living to reflect ROK	
Wages	Currently very low in north, rapid rise could outpace productivity and lead to inflation	Over time, raise wages in the north to at least 60% of south	
Unemployment	Reduced need for industrial workers and military	Investment, short term social programs, retraining	
Environment	Water pollution, inadequate potable water, water-borne disease, deforestation, soil erosion and degradation	Massive, coordinated cleanup program	

TABLE 1: REUNIFICATION ECONOMIC ISSUES

## RESOURCES

It is in the interest of the commercial world that wealth should be found everywhere.

?Edmund Burke

In order to effectively reunify the two Koreas, available resources will have to be employed as effectively as possible. There are many potential types of support that could be incorporated into the reunification process (Table 3). A substantial investment from within Korea will certainly be necessary. However, outside resources must be identified and effectively incorporated. Other countries could possibly offer financial support and technical expertise. International organizations, especially those with economic arms, will be able to assist in the process. Given the significant financial requirement, international financial organizations must be included.

### DPRK RESOURCES

Any inventory of resources must consider what is currently available on the peninsula, in the north, as well as the south. Both halves have the capability to make contributions to economic reunification.

The north could contribute natural resources to economic integration and subsequent development. North Korea has iron, coal, magnesium, lead, zinc, tungsten, mercury, gold, and silver. There are indications there may be oil deposits.<sup>120</sup>

Reunification will also provide a land route from the southern part of the peninsula to the rest of Asia. This will result in decreased transportation costs and improved trade with other Asian nations.<sup>121</sup> It will even be possible to reach Europe through Russia, reducing transit times from 26 to eight days.<sup>122</sup>

### ROK RESOURCES

A significant portion of reunification costs will fall on the ROK population. For the ROK government to continue to be credible, the burden cannot dramatically effect the standard of living in the south. If the German experience is any indication, the burden must be shared equally to be readily accepted.<sup>123</sup> Government-issued bonds would be one solution, allowing private investors to participate in the recapitalization of the economy in the north. However, for this concept to work, ROK financial markets would need to become more open to foreign investment before reunification.<sup>124</sup>

One benefit that will accrue is a reduction in defense spending. The peninsula as a whole will no longer need to maintain a large standing army. The ROK now spends 3.4 percent of its GNP on its military; cutting that amount in half will save several billion dollars a year.<sup>125</sup>

#### UNITED STATES SUPPORT

The United States has been the largest provider of humanitarian assistance to the DPRK.<sup>126</sup> Since 1995, the U.S. has provided \$591 million in food assistance, including 40-percent of the total in 2001.<sup>127</sup> U.S. nongovernmental organizations have also been heavily involved in providing humanitarian assistance to the DPRK, both directly and through international affiliates. Some programs have even established a part-time presence in the country.<sup>128</sup>

U.S. humanitarian assistance policy is codified in the Foreign Assistance Act of 1961 and its amendments. Responsibility for implementing foreign disaster assistance is assigned to the Office of Foreign Disaster Assistance (OFDA) within the U.S. Agency for International Development (USAID). Countries requiring aid must meet the following criteria:

- The magnitude of the disaster exceeds the affected country's capacity to respond.
- The country has requested/will accept U.S. assistance.
- It is in the U.S.'s interest to provide assistance.<sup>129</sup>

OFDA coordinates with the government of the country requiring assistance. The office also works in concert with other governments, international organizations (IOs), United Nations (UN) relief organizations, as well as private voluntary and nongovernmental organizations (PVO/NGO).<sup>130</sup>

The primary consideration in disaster response is getting support to the neediest victims expeditiously in order to reduce death and suffering. However, there must still be effective systems of internal control.<sup>131</sup>

There have been limits to U.S. organizations' activities in the DPRK. The Foreign Assets Control Regulations restrict U.S. citizens economic transactions with countries designated as terrorist states,<sup>132</sup> which include the DPRK.<sup>133</sup> There are exceptions. Commercial products meeting basic human needs may be exported, and U.S. citizens may make humanitarian assistance donations to victims of natural disasters through recognized agencies.<sup>134</sup> Reunification would mean the area would no longer be designated as a terrorist state, and the

United States government, as well as private entities, would have a great deal more leeway in providing support to the northern part of the peninsula.

President Bush has indicated a willingness to provide assistance to the north. However, he has suggested that aid must lead to economic reform and a more open system, with the objective being an economically viable work force.<sup>135</sup>

#### CHINA

China has been increasing its political and economic ties to the ROK. It is now the ROK's third largest trading partner, and trade between the two countries is now approaching \$25 billion.<sup>136</sup> A unified Korea with a robust economy will provide increased trade opportunities for both the peninsula and the Chinese. China could look for investment opportunities in the northern half of the peninsula, providing capital and employment.

#### JAPAN

Stability on the Korean peninsula greatly matters to Japan. Given the country's proximity to the peninsula, its relationship with the ROK and DPRK are critically important. Japan has also served as the model for South Korean economic development.<sup>137</sup>

One dynamic that must be considered is Japan's history of occupation in Korea.<sup>138</sup> From 1905 to 1945, the Japanese occupied the Korean peninsula as a colonial power.<sup>139</sup> Any Japanese involvement would have to be handled with sensitivity.<sup>140</sup> There have been a number of efforts to resolve issues between the ROK and Japan, such as the treatment of "comfort women" during the Japanese occupation. Although there have been apologies from Japan, there is still some deep-seated resentment.<sup>141</sup> There is also concern in some quarters that Japanese support could evolve into "recolonization" of the peninsula.<sup>142</sup>

Japan has the resources necessary to provide financial support to a reunified Korea. Potentially, it could be characterized as compensation for its occupation of the peninsula, thus helping to bring closure to a difficult period in both countries' histories, as well as improving stability in Northeast Asia.<sup>143</sup>

Any Japanese involvement is most likely to be in a support role, providing logistics support and access to bases for other entities participating in reunification, most likely in support of the Americans.<sup>144</sup> Given the Koreans' memories of Japanese occupation, their direct involvement could be counterproductive.

## RUSSIA

Korea has been considered a factor in Russian security since the rule of the czars.<sup>145</sup> Russia shares a border with the DPRK<sup>146</sup> and would have an interest in being included in the implementation of Korean reunification. Following a visit to the ROK in July 2002, the Russian foreign minister indicated that the ROK was interested in Russian assistance in resolving disputes between the north and south.<sup>147</sup> Additionally, Russia regards the ROK as one of its most important economic partners in Asia.<sup>148</sup> This relationship could expand with the linking of Korea's railroad system with the Trans-Siberian Railway. This would dramatically improve Korea's ability to export its products to Europe.

## EUROPEAN UNION

The European Union (EU) has been actively involved on the Korean peninsula. From 1996 to 2002, the EU provided in excess of 50 million euros for humanitarian assistance to the DPRK, 19.5 million of it in 2002. For 2003, they have allocated an additional 9.5 million euros. ECHO, the Humanitarian Aid Office of the European Commission, is responsible for dispersing the funding.<sup>149</sup> This aid has been used to improve health and nutrition, as well as improving water supplies and sanitation.<sup>150</sup>

The EU and Republic of Korea have a robust trading relationship; the EU is the largest investor in the ROK and the third largest trading partner. During the Asian economic crisis in 1997 and 1998, the EU contributed funding for the ROK's stand-by agreement with the International Monetary Fund (IMF). Since the economic crisis, European investment in the ROK has increased. This is the result of a more open investment situation and Korean companies' increased need for outside capital and expertise.<sup>151</sup> Two-way trade between the ROK and the EU amounted to 41.23 billion euros in 2001.<sup>152</sup>

Given its relationship with the ROK and its support to the DPRK, the EU is certain to be involved in a reunited peninsula. It is a potential source of investment capital, as well as humanitarian assistance for the north.

## NONGOVERNMENTAL ORGANIZATIONS (NGOS)/PRIVATE VOLUNTEER ORGANIZATIONS (PVOS)/INTERNATIONAL ORGANIZATIONS (IOS)

In addition to the United States, a myriad of governments and agencies have provided humanitarian support to the DPRK. United Nations agencies, including the World Food Program, UNICEF, and the World Health Organization (WHO), have established resident offices. NGOs and governments from throughout the world have provided aid, some in residence (European organizations), and others through non-resident programs (Republic of

Korea and Japan).<sup>153</sup> It is very likely that these organizations will continue and possibly increase the humanitarian assistance they are providing to North Korea.

The level of support should actually improve, as organizations that have left return. For example, Medecins Sans Frontieres withdrew from the DPRK in part because its staff was forced to pass expensive supplies to hospitals and not allowed to see how and where the aid was used.<sup>154</sup> Oxfam and Care both left to protest their inability to monitor aid distribution. The World Food Program has cut its contribution by 60,000 tons because it could not verify how the aid was distributed.<sup>155</sup> In a more open environment, these organizations should be able to operate without the restrictions that have caused them to withdraw.

## FINANCIAL INSTITUTIONS

Another resource to be considered to support reunification is international financial institutions. Based on past lending, Korea can most likely expect some supplemental support from organizations such as the International Monetary Fund (IMF) and World Bank, perhaps as much as hundreds of millions of dollars. However, most financial support will have to come from private sources, as international financial institutions do not have the resources to support Korea on the same level as the Palestinian Authority, for example.<sup>156</sup>

The International Monetary Fund has been involved in the ROK's efforts to recover from the 1997 Asian financial crisis. It is reasonable to assume that the IO would take an active role in the economic reunification of the peninsula. Its 184 members "promote international monetary cooperation, exchange stability, and orderly exchange arrangements; to foster economic growth and high levels of employment; and to provide temporary financial assistance to countries to help ease balance of payments adjustments."<sup>157</sup>

The World Bank Group provides developmental assistance. In 2002, it provided \$19.5 billion in loans, working to improve the standard of living and eliminate poverty in the poorest countries.<sup>158</sup> Although it emphasizes support to the poorest nations, for every client nation it focuses on health and education, social development, improving government functions, protecting the environment, assisting with private business development, and encouraging economic reforms.<sup>159</sup>



<b>Issue</b>	<b>NGOs</b>	<b>PVOs</b>	<b>Korean Corps</b>	<b>Int'l Corps</b>	<b>Korean Banks</b>	<b>Int'l Fin'l Inst.</b>
Cost			X	X	X	X
Ideology						
Malnutrition	X	X				
National Debt					X	X
Monetary Union						
Property Rights						
Industry			X	X	X	X
Agriculture	X	X	X	X	X	X
Infrastructure	X	X	X	X	X	X
Migration	X	X	X	X		
Wages			X	X		
Unemployment			X	X		
Environment	X	X	X	X		
<b>Issue</b>	<b>Other Gov'ts</b>	<b>US</b>	<b>China</b>	<b>Germany</b>	<b>EU</b>	<b>IOs</b>
Cost	X	X			X	
Ideology		X		X		
Malnutrition	X	X	X		X	X
National Debt	X	X				
Monetary Union				X	X	
Property Rights				X		
Industry	X	X	X		X	X
Agriculture	X	X	X			X
Infrastructure	X	X	X		X	X
Migration		X	X			X
Wages		X		X		
Unemployment		X		X		
Environment	X	X		X	X	X

TABLE 2: RESOURCES FOR ECONOMIC REUNIFICATION

## IMPLEMENTATION

Our policy is directed not against any country or doctrine, but against hunger, poverty, desperation, and chaos. Its purpose should be the revival of a working economy in the world so as to permit the emergence of political and social conditions in which free institutions can exist.

?George Marshall

Economic reunification on the Korean peninsula must be a thoughtfully planned and carefully implemented process. General Marshall's comments about the plan for rebuilding

Europe after World War II are definitely applicable to the situation in which a reunified Korea will find itself. Effective economic reunification will require the efforts and support of a myriad of participants, including governments, nongovernmental and international organizations, financial institutions, and private corporations. Korea must facilitate the participation of all these contributors.

The German case study provides a starting point for analyzing the impact of reunification on the Korean economy. The Germans faced a number of issues that will be magnified in the Korean situation.

The Koreans must realistically begin to quantify and determine ways to manage the costs associated with reunification. After reunification, the Germans moved an estimated 1,000 billion DM to the East between 1991 and 1996. Economic support to East Germany equaled 63 percent of East German GDP in 1991 and increased to 95 percent of the East's GDP in 1992. It then began to decrease, falling to 34 percent by 1996. This funding supported social security, deficit payment, privatization costs, and investment inducement.<sup>160</sup> More than 75 percent of the aid went to consumption expenditures, such as maintaining the standard of living, while less than 25 percent went to investment in the economy. The emphasis on social security was the result of a decision to immediately provide the same level of benefits in the East as those enjoyed by West Germans.<sup>161</sup>

The lesson is that the Koreans must develop a methodology that will gradually improve the standard of living in the north, instead of immediately raising the north to the south's level. This methodology must determine the minimum cost necessary to prevent massive migration to southern cities, estimated at approximately \$1 trillion. Since Korea does not have the resources to finance this effort, private investment by the international business community must be actively encouraged.

Obtaining private support will assist in the resolution of a number of issues, including migration, improvement of the industrial base, increased wages, and maintaining employment opportunities for those who are displaced by reunification, such as members of the military. The Korean government will have to carefully manage the increase in wages to balance improving the standard of living with avoiding the possibility of inflation. Koreans should be better able to manage the wage issue than the Germans were. As in the south, the government should be able to dominate the management of the economy.<sup>162</sup> The Korea Development Institute projects a requirement for fifty percent of the government's reunification costs to go to industrial upgrades. However, the German experience indicates that may not be feasible,<sup>163</sup> making private resources essential.

Monetary union must be approached in a reasonable manner. On this issue, the Korean government must also balance the need to improve the north's standard of living while controlling inflation. Additionally, if reports from defectors are accurate, segments of north Korean society will have to be taught how money is used. Providing the north with a convertible currency will also improve access to capital and credit.

National debt will impact the Korean economy in two ways. It will limit the resources available to finance integration of the peninsula, and given the DPRK's credit rating, it could impact access to funding. To preclude this, DPRK debt renegotiation and conversion will be necessary. This will require a combination of debt forgiveness and consolidation, supplemented by the issuance of zero-coupon bonds. These are issues that will need to be worked with the international financial community.

Ideological differences will initially create some tension. Only one in five north Koreans is old enough to remember life before the DPRK.<sup>164</sup> After half a decade of isolation, the population in the north will have to adjust to a more open society. Currently, in the north, the media are controlled by the government and are used to disseminate information in terms favorable to the party leadership.<sup>165</sup> The Korean government must assist the population in transitioning to an environment in which independent thought and action are encouraged in order to effectively implement an open government and economy. Funding must be provided to support this re-education effort and support the reintegration of the approximately 21 million people in the north. It has been suggested that encouraging those South Koreans with families north of the DMZ to return to ancestral homes would assist in this process. Perhaps incentives could be provided to facilitate the return, similar to the privileges currently provided to villagers living within the DMZ. The reintroduction of religion is also seen as a potential bridge to accepting and understanding a more open society,<sup>166</sup> so involving Korean religious authorities, as well as NGOs and PVOs with religious ties, will assist in the reintegration process.

The judicious handling of property rights will improve the speed and efficiency of economic reunification. The Korean government must avoid Germany's pitfall and work quickly to resolve disputes between current and previous owners. By issuing bonds and establishing a separate court system for property disputes, Korea can ensure that the issue does not unnecessarily slow reintegration and increase its costs. Establishing criteria up front will remove the uncertainty that property owners experienced in Germany.

The long-term malnutrition that exists in the north will have a significant economic impact on the reunited country. This is an impact that is not necessarily factored into estimates of the overall costs of reunification. The impact will be felt in the work force, the health care system,

and the schools. The government and Korean medical personnel will have to work with NGOs, PVOs, and IOs that have experience dealing with malnutrition to develop a program to bring the population back to health. Some percentage of the work force may have reduced capabilities because of physical or mental limitations resulting from the malnutrition. Schools will need to be equipped to handle children who have mental deficiencies resulting from malnutrition. Based on the experiences of other countries, Korea will need to budget somewhere between three and nine percent of the DPRK's GDP to cover the increased costs, as well as identifying outside sources of assistance.

Support from a broad range of sources will be critical to correct infrastructure and environmental problems. Given all of the other costs associated with reunification, the Korean government will need to look to outside financing to rebuild infrastructure in the north and bring it up to current standards. Corporations within Korea, as well as international companies, are possible sources of financing. In some instances, NGOs, IOs, and international financial institutions may offer support. Environmental problems are likely to be significant, based on the German experience. However, this is an area where a wide variety of international support should be available, from other governments to IOs and NGOs with environmental experience. The Korean government must leverage and coordinate all available support to resolve this issue as rapidly as possible. A thorough assessment in the early stages will permit the government to prioritize requirements and determine the best means to fulfill them.

Finally, agriculture must be restored in the north. Only 17 percent of the land in the north is arable,<sup>167</sup> so the loss of 20 percent is significant. With expertise from IOs, NGOs, and other governments, Korea can work to reclaim lost farmland and to institute modern agricultural methods. The United Nations Development Programme (UNDP) has estimated the cost for improving the agricultural sector at \$300 million. This amount would provide farm machinery, fertilizer, fuel, crop diversification, and reforestation.<sup>168</sup>

Rapid and efficient infusion of capital is critical to successful economic reunification. The Korean government must work to access every available source of financing and support. This entails opening its markets and improving access. Again, early assessment and prioritization are essential to an efficient restoration program.

There are steps that the ROK can take now in preparation for potential economic reunification. The DPRK economy has been described as "the world's largest contingent liability."<sup>169</sup> To prepare for this contingent liability, the ROK Government must work to minimize the debt it carries.<sup>170</sup>

A coherent, integrated plan is key. All of the potential participants must be involved in the process from the earliest possible time to permit the best possible support. Inclusion will make those involved more willing participants and ensure that they understand the wide range of issues to be considered during the reunification process. It will also reduce the suspicion that may develop if there is no prepared plan and organizations compete for resources and access. Finally, there must be a thoughtful, rational matching of resources with requirements.

Any plan for the reunification of the Korean peninsula must emphasize the economic issues. By effectively reintegrating the economies and avoiding the pitfalls of Germany, Korea can continue in its role as one of the economic tigers in Asia. Although there will be significant costs in the short term, the expansion of its work force and increased access to resources and markets could lead to greatly increased prosperity and economic power over time.

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## GLOSSARY

DM	Deutch Mark
DMZ	Demilitarized Zone
DPRK	Democratic People's Republic of Korea
EU	European Union
FRG	Federal Republic of Germany
GDP	Gross Domestic Product
GDR	German Democratic Republic
GNP	Gross National Product
IMF	International Monetary Fund
IO	International Organization
MOU	Ministry of Unification
NGO	Nongovernmental Organization
OFDA	Office of Foreign Disaster Assistance
ROK	Republic of Korea
UNDP	United Nations Development Programme
U.S.	United States





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